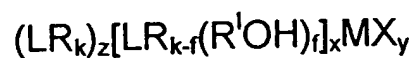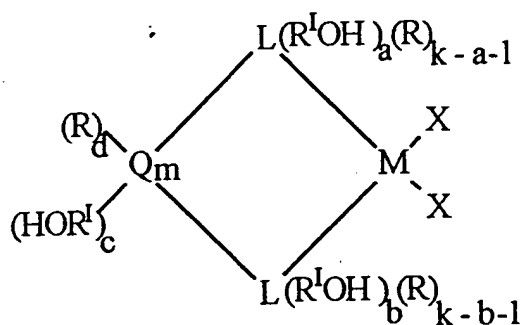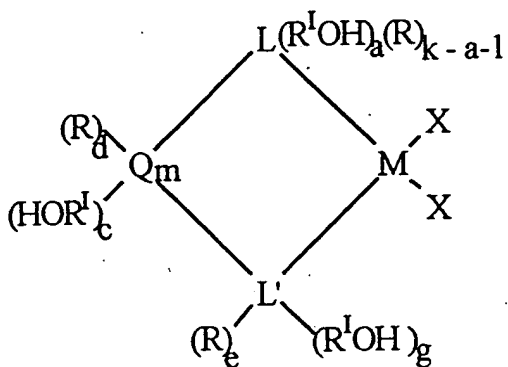1. (amended twice) A heterogeneous catalytic component
[obtainable] <u>obtained</u> by reacting a porous inorganic support with
a metallocene compound, wherein the metallocene compound is
defined by formula I, II, or III:

$$(LR_k)_z[LR_{k-f}(R^IOH)_f]_xMX_y \qquad I,$$

$$II, \quad or$$

$$III,$$

wherein:

the **L** groups are equal to or different from each other, wherein each **L** is selected from the group consisting of: cyclopentadienyl, indenyl, tetrahydroindenyl, fluorenyl, octahydrofluorenyl, and benzoindenyl;

each **R** is independently hydrogen, linear or branched C_1-C_{20} alkyl, linear or branched C_3-C_{20} cycloalkyl, linear or branched C_6-C_{20} aryl, linear or branched C_3-C_{20} alkenyl, linear or branched C_7-C_{20} arylalkyl, linear or branched C_7-C_{20} alkylaryl, linear or branched C_8-C_{20} arylalkenyl, or a group SiR^{II}_3, wherein the C_1-C_{20} alkyl, the C_3-C_{20} cycloalkyl, the C_6-C_{20} aryl, the C_3-C_{20} alkenyl, the C_7-C_{20} arylalkyl, the C_7-C_{20} alkylaryl, and the C_8-C_{20} arylalkenyl are optionally substituted with 1 to 10 halogen atoms; [;]

the **R^I** groups are equal to or different from each other, wherein each **R^I** is a divalent aliphatic or aromatic hydrocarbon group containing from 1 to 20 carbon atoms, optionally containing from 1 to 5 heteroatoms of groups 14 to 16 of the Periodic Table of the Elements, and optionally containing boron;

each **Q** is independently B, C, Si, Ge, or Sn;

M is a lanthanide, an actinide, or a metal of group 3, 4, or 10 of the Periodic Table of the Elements[, and M has a valence];

each **X** is independently hydrogen, chlorine, bromine, OR^{II},

NR^{II}_2, C_1-C_{20} alkyl, or C_6-C_{20} aryl ;

each $\mathbf{R^{II}}$ is independently linear or branched C_1-C_{20} alkyl, linear or branched C_3-C_{20} cycloalkyl, linear or branched C_6-C_{20} aryl, linear or branched C_3-C_{20} alkenyl, linear or branched C_7-C_{20} arylalkyl, linear or branched C_7-C_{20} arylalkenyl, or linear or branched C_7-C_{20} alkylaryl;

$\mathbf{L'}$ is N or O;

when $\mathbf{L}$ is cyclopentadienyl, $\mathbf{k}$ is equal to 5; when $\mathbf{L}$ is indenyl, $\mathbf{k}$ is equal to 7; when $\mathbf{L}$ is fluorenyl or benzoindenyl, $\mathbf{k}$ is equal to 9; when $\mathbf{L}$ is tetrahydroindenyl, $\mathbf{k}$ is equal to 11; and when $\mathbf{L}$ is octahydrofluorenyl, $\mathbf{k}$ is equal to 17;

$\mathbf{z}$ is equal to 0, 1, or 2;

$\mathbf{x}$ is equal to 1, 2, or 3;

$\mathbf{y}$ is equal to 1, 2, or 3;

$\mathbf{x}$ + $\mathbf{y}$ + $\mathbf{z}$ is equal to [the] $\underline{a}$ valence of $\mathbf{M}$;

$\mathbf{m}$ is equal to 1, 2, 3 or 4;

$\mathbf{a}$ is an integer whose value ranges from 0 to $\mathbf{k}$-1;

$\mathbf{b}$ is an integer whose value ranges from 0 to $\mathbf{k}$-1;

$\mathbf{f}$ is an integer whose value ranges from 1 to $\mathbf{k}$;

$\mathbf{g}$ is equal to 0 to 1;

$\mathbf{c}$ is equal to 0 or 1;

$\mathbf{e}$ is equal to 0 or 1;

$\mathbf{a}$ + $\mathbf{b}$ + $\mathbf{c}$ is at least 1;

$\mathbf{a}$ + $\mathbf{g}$ + $\mathbf{c}$ is at least 1;

$\mathbf{d}$ is equal to 0, 1, or 2;

when $\mathbf{Q}$ is B, then $\mathbf{c}$ + $\mathbf{d}$ = 1;

when $\mathbf{Q}$ is C, Si, Ge, or Sn, then $\mathbf{c}$ + $\mathbf{d}$ = 2;

when $\mathbf{L'}$ is N, then $\mathbf{g}$ + $\mathbf{e}$ = 1; and

when $\mathbf{L'}$ is O, then $\mathbf{g}$ = 0 and $\mathbf{e}$ = 0.
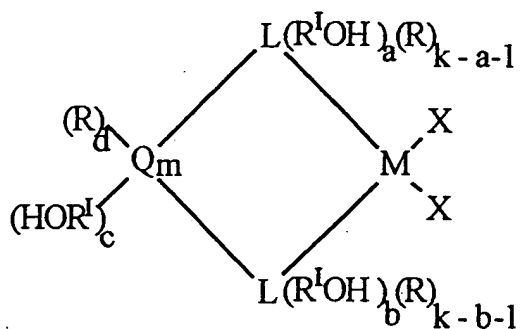
5. (amended three times) A heterogeneous catalytic component according to claim 1 wherein the inorganic support is <u>previously</u> treated with alumoxane or trialkylaluminum.
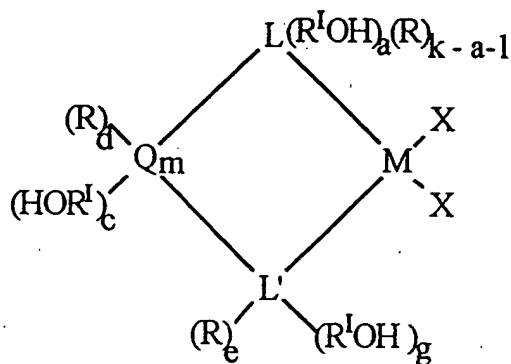
6. (amended twice) A heterogeneous catalytic component [obtainable] <u>obtained</u> by reacting an alumoxane or a trialkylaluminum with a metallocene compound defined by formula I, II, or III:

$$(LR_k)_z[LR_{k-f}(R^lOH)_f]_xMX_y \qquad I,$$

$$II, \text{ or}$$

$$III,$$

wherein:

the **L** groups are equal to or different from each other, wherein each **L** is selected from the group consisting of: cyclopentadienyl, indenyl, tetrahydroindenyl, fluorenyl, octahydrofluorenyl, and benzoindenyl;

each **R** is independently hydrogen, linear or branched C_1-C_{20} alkyl, linear or branched C_3-C_{20} cycloalkyl, linear or branched C_6-C_{20} aryl, linear or branched C_3-C_{20} alkenyl, linear or branched C_7-C_{20} arylalkyl, linear or branched C_7-C_{20} alkylaryl, linear or branched C_8-C_{20} arylalkenyl, or a group SiR^{II}_3, wherein the C_1-C_{20} alkyl, the C_3-C_{20} cycloalkyl, the C_6-C_{20} aryl, the C_3-C_{20} alkenyl, the C_7-C_{20} arylalkyl, the C_7-C_{20} alkylaryl, and the C_8-C_{20} arylalkenyl are optionally substituted with 1 to 10 halogen atoms; [;]

the **R^I** groups are equal to or different from each other, wherein each **R^I** is a divalent aliphatic or aromatic hydrocarbon group containing from 1 to 20 carbon atoms, optionally containing from 1 to 5 heteroatoms of groups 14 to 16 of the Periodic Table of the Elements, and optionally containing boron;

each **Q** is independently B, C, Si, Ge, or Sn;

M is a lanthanide, an actinide, or a metal of group 3, 4, or 10 of the Periodic Table of the Elements[, and M has a valence];

each **X** is independently hydrogen, chlorine, bromine, OR^{II}, NR^{II}_2, C_1-C_{20} alkyl, or C_6-C_{20} aryl;

each **R^{II}** is independently linear or branched C_1-C_{20} alkyl, linear or branched C_3-C_{20} cycloalkyl, linear or branched C_6-C_{20} aryl, linear or branched C_3-C_{20} alkenyl, linear or branched C_7-C_{20} arylalkyl, linear or branched C_7-C_{20} arylalkenyl, or linear or branched C_7-C_{20} alkylaryl;

L' is N or O;

when **L** is cyclopentadienyl, **k** is equal to 5; when **L** is indenyl, **k** is equal to 7; when **L** is fluorenyl or benzoindenyl, **k** is equal to 9; when **L** is tetrahydroindenyl, **k** is equal to 11; and when **L** is octahydrofluorenyl, **k** is equal to 17;

z is equal to 0, 1, or 2;

x is equal to 1, 2, or 3;

y is equal to 1, 2, or 3;

x + **y** + **z** is equal to [the] <u>a</u> valence of **M**;

m is equal to 1, 2, 3 or 4;

a is an integer whose value ranges from 0 to **k**-1;

b is an integer whose value ranges from 0 to **k**-1;

f is an integer whose value ranges from 1 to **k**;

g is equal to 0 to 1;

c is equal to 0 or 1;

e is equal to 0 or 1;

a + **b** + **c** is at least 1;

a + **g** + **c** is at least 1;

d is equal to 0, 1, or 2;

APPENDIX A

when **Q** is B, then **c** + **d** = 1;

when **Q** is C, Si, Ge, or Sn, then **c** + **d** = 2;

when **L'** is N, then **g** + **e** = 1; and

when **L'** is O, then **g** = 0 and **e** = 0.